

REMARKS

This responds to the Office Action dated October 28, 2008. Claims 50, 56, 82, and 96 are amended. Claims 81, 92, 95 and 97 have been cancelled. As a result, claims 50, 56-59, 72, 73, 82, 83 and 93, 94, and 96 are now pending in this application.

Allowable Subject Matter

The Examiner has objected to claims 82 and 83 and noted that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

§102 Rejection of the Claims

The Examiner rejected claims 50, 56-59, 72, 73 and 92-97 under 35 USC §102 as being anticipated by Broughton et al. (4,807,031). This rejection is respectfully traversed.

To anticipate a claim, the reference must teach every element of the claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”¹ It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, “[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim*.”² Applicants submit that the Office Action did not make out a *prima facie* case of anticipation as Broughton does not teach each and every claim element of these independent claims.

Broughton relates to a method and apparatus for in-band, video broadcasting of commands to interactive devices.³ Control data is encoded by subliminal modulation within “a selected sequence of video image fields.”⁴ The modulated video image fields “each have alternately, proportionally raised and lowered luminance horizontal scan lines.”⁵

¹ *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

² *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added).

³ See Abstract.

⁴ See Abstract.

⁵ See Abstract.

With respect to independent claim 50 as presently amended, Broughton fails to teach or suggest modulating at least one first field segment of the segments of the first field and at least one second field segment of the segments of the second field with auxiliary data by altering the pixel value of the pixels of the first field segment and the second field segment, wherein at least one second corresponding field segment in the second field that corresponds to the first modulated field segment is not modulated, at least one first corresponding field segment in the first field that corresponds to the second modulated field segment is not modulated, and the pixels in a corresponding field segment of a field of the frame that correspond to the pixels in a particular modulated field segment of the other field of the frame have a different pixel value based on the modulating of the first field segment and the second field segment.

Broughton indicates that, when encoding, “[h]igher data rates also may be achieved by the division of the viewing area 14c unto multiple regions, each of which is subliminally modulated to encode one or more binary bits of data.”⁶ The divided viewing area is detected by the use of multiple transducers.⁷ The data is detected and decoded in parallel.⁸

Broughton therefore discloses independent encoding in the multiple regions of the viewing area. There is no disclosure in Broughton that at least one first field segment of the segments of the first field and at least one second field segment of the segments of the second field are modulated with auxiliary data by altering the pixel value of the pixels of the first field segment and the second field segment, wherein at least one second corresponding field segment in the second field that corresponds to the first modulated field segment is not modulated, at least one first corresponding field segment in the first field that corresponds to the second modulated field segment is not modulated, and the pixels in a corresponding field segment of a field of the frame that correspond to the pixels in a particular modulated field segment of the other field of the frame have a different pixel value based on the modulating of the first field segment and the second field segment as claimed.

In view of the above remarks, the Applicants respectfully submit Broughton fails to teach or suggest at least one claim element of independent claim 50, and therefore independent claim

⁶ See Col. 7, lines 50-54.

⁷ See Col. 7, lines 50-57.

⁸ See *Id.*

50 is not anticipated by the Broughton reference. Accordingly, the Examiner is respectfully requested to withdraw his rejection of independent claim 50 and indicate the allowance thereof. As such, the Examiner is also respectfully requested to withdraw his rejection of dependent claims 93, 94, and 96 and indicate the allowance thereof by virtue of their respective dependencies from independent claim 50.

With respect to claim 56, Broughton fails to teach or suggest a method comprising optically obtaining a frame of a video signal from a display device, seeking and synchronizing to a vertical retrace period of the video signal and determining whether auxiliary data is present in the frame by performing a field comparison on a plurality of segments of a first field and a plurality of corresponding segments of a second field for the frame based on seeking and synchronizing to the vertical retrace period.

In Broughton, a video signal is modulated “at frequencies that are related to multiples and submultiples of the horizontal line rate, to produce a subtle video subcarrier.”⁹ The video signal is received and analyzed by receiver/transmitter electronics.¹⁰ The electronics “analyze[s] the [] signal for energy within a range around 7.867 kHz, ..., the frequency at which luminance is modulated in the viewing area 14c of the television screen.”¹¹ “In the presence of luminance modulation within this range of frequencies, the output of receiver electronics 56 represents a binary 1 or 0, indicating the presence and sense of control data intended for ancillary use ...”¹²

Broughton does not seek and synchronize to a vertical retrace period of the video signal and determine whether auxiliary data is present in the frame by performing a field comparison on segments of a first field and corresponding segments of a second field for the frame based on the seeking and synchronizing to the vertical retrace period as claimed.

As Broughton does not teach all of the claim elements of independent claim 56, Applicants respectfully request that the Examiner withdraw his rejection of independent claim 56 and indicate the allowance thereof. In addition, the Examiner is respectfully requested to withdraw his rejection of dependent claims 57-59, 72, and 73 by virtue of their respective dependencies from independent claim 56.

⁹ See Col. 2, lines 63-65.

¹⁰ See Col. 7, lines 57-60 and FIG. 3.

¹¹ See Col. 7, line 67 – Col. 8, line 4.

¹² See Col. 8, lines 4-9.

Reservation of Rights

In the interest of clarity and brevity, Applicants may not have equally addressed every assertion made in the Office Action; however, this does not constitute any admission or acquiescence by the Applicants. Applicants reserve all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicants do not admit that any of the cited references or any other references of record may be relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicants timely object to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. The Applicants further reserve all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (314) 622-6605 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-1662.

Respectfully submitted,

POLSINELLI SHUGHART PC

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Dated

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